

WHAT IS CLAIMED IS:

1. A recording apparatus for recording desired files on a recording medium, the recording apparatus comprising:

index file production means for producing an index file of the files recorded on the recording medium from extract information of the files and a folder;

said index file production means being operable to classify the extract information for individual types of the extract information into groups including a group of property to which property information of the files is allocated and a different group different from the group of property, to allocate, in the different group of the extract information, the extract information of one of the files or the folder to one or a plurality of slots of a fixed length, and to allocate, in the group of property, the extract information of the one file or the folder to one or a plurality of slots of the fixed length so that said group of property has at least slots corresponding to the slots of the different group to produce the index file;

said index file production means setting, in the slots of the group of property, management information for managing the groups;

said index file production means setting, in the management information of each of the slots of the group of property, valid/invalid information representative of whether the slot is valid or invalid, an extension slot number pointing to an extension slot succeeding the slot, presence/absence information representative of whether a corresponding slot of the different group to which the extract information of the file relating to the slot is allocated is present or absent, a slot number pointing to the corresponding slot of the different group, and extension information representative of whether or not the corresponding slot of the different group is an extension slot;

a combination of the slots to which the extract information of the one file or the folder is allocated with the extension slot number, presence/absence information, slot number, and extension information being indicated by the group of property.

2. The recording apparatus according to claim 1, wherein, when the extract information of all of the groups relating to a predetermined one of the files or the folder is to be deleted, in the slot or each of the slots of the group of property, which has or have the extract information, the slot number, which points to the

corresponding slot of the different group, is maintained without being changed while the valid/invalid information is set to invalid and the extension slot number, presence/absence information, and extension information are cleared thereby to set all of the slots to which the extract information of the file or the folder is allocated as free slots.

3. The recording apparatus according to claim 1, wherein, when the extract information of the different group relating to a predetermined one of the files or the folder is to be deleted, in the slot or each of the slots of the group of property, which has or have the property information of the extract information, the valid/invalid information, extension slot number, and slot number are maintained without being changed while the presence/absence information is set to absence and the extension information is cleared thereby to set the corresponding slot of the different group as a free slot.

4. The recording apparatus according to claim 2, wherein said index file production means detects a free slot of the group of property with reference to the valid/invalid information, detects a combination of free slots to which the extract information of the predetermined file or the folder was allocated in the

past with reference to the slot number set in the detected free slot, and registers the extract information into the detected combination of free slots.

5. The recording apparatus according to claim 4, wherein, where the detected combination of free slots gives rises to shortage of a slot, said index file production means adds, when the group with regard to which the shortage of a slot occurs is the group of property, a free slot based on setting of the valid/invalid information, but adds, when the group with regard to which the shortage of a slot occurs is the different group, a free slot to the group, and sets the slot number of the added slot to the slot number in the free slot of the group of property, which points to the corresponding slot of the different group, adds the added slot to the combination of detected free slots, and registers the extract information into the resulting combination of free slots.

6. The recording apparatus according to claim 5, wherein said index file production means executes, upon addition of a free slot, collective addition of a predetermined plural number of free slots, adds a number of slots equal to the number of slots corresponding to the shortage from among the added free slots to the

combination of detected free slots, and registers the extract information into the resulting combination of free slots.

7. The recording apparatus according to claim 2, wherein, where a plurality of slots are required for the group of property in order to register the extract information, said index file production means detects a number of free slots required for the group of property with reference to the valid/invalid information, successively sets the extension slot number of each of the free slots so as to point from each one of the free slots to a different one of the free slots thereby to set a combination of free slots relating to the one free slot and another combination of free slots relating to the different free slot to one combination of free slots, and registers the extract information into the one combination of free slots.

8. The recording apparatus according to claim 4, wherein, where the detected combination of free slots gives rises to shortage of a slot in the different group, said index file production means sets the slot number in the detected combination of free slots so as to point to a free slot of the corresponding group, which is set as a free slot in a different combination of slots and sets

the presence/absence information so as to match with the setting of the slot number thereby to add the free slot of the corresponding group in the different combination of slots to the detected combination of free slots, sets a null value to the slot number in the different combination of slots so as not to point to the slot set as a free slot in the different combination of slots thereby to remove the slot set as a free slot from the different combination of slots, and registers the extract information into the detected combination of free slots.

9. A file management method for managing a plurality of files stored in a predetermined region, comprising the steps of:

classifying extract information of the files and a folder for individual types of the extract information into groups including a group of property to which property information of the files is allocated and a different group different from the group of property;

allocating, in the different group of the extract information, the extract information of one of the files or the folder to one or a plurality of slots of a fixed length; and

allocating, in the group of property, the extract information of the one file or the folder to one or a

plurality of slots of the fixed length so that said group of property has slots at least corresponding to the slots of the different group to produce an index file;

the slots of the group of property having set therein management information for managing the groups being set;

the management information of each of the slots of the group of property having set therein valid/invalid information representative of whether the slot is valid or invalid, an extension slot number pointing to an extension slot succeeding the slot, presence/absence information representative of whether a corresponding slot of the different group to which the extract information of the file relating to the slot is allocated is present or absent, a slot number pointing to the corresponding slot of the different group, and extension information representative of whether or not the corresponding slot of the different group is an extension slot;

a combination of the slots to which the extract information of the one file or the folder is allocated with the extension slot number, presence/absence information, slot number, and extension information being indicated by the group of property.

10. A program for a file management method for causing a computer to execute a predetermined procedure to manage a plurality of files stored in a predetermined region, the processing procedure comprising the steps of:

classifying extract information of the files and a folder for individual types of the extract information into groups including a group of property to which property information of the files is allocated and a different group different from the group of property;

allocating, in the different group of the extract information, the extract information of one of the files or the folder to one or a plurality of slots of a fixed length; and

allocating, in the group of property, the extract information of the one file or the folder to one or a plurality of slots of the fixed length so that said group of property has at least slots corresponding to the slots of the different group to produce an index file;

the slots of the group of property having set therein management information for managing the groups being set;

the management information of each of the slots of the group of property having set therein valid/invalid information representative of whether the slot is valid



or invalid, an extension slot number pointing to an extension slot succeeding the slot, presence/absence information representative of whether a corresponding slot of the different group to which the extract information of the file relating to the slot is allocated is present or absent, a slot number pointing to the corresponding slot of the different group, and extension information representative of whether or not the corresponding slot of the different group is an extension slot;

a combination of the slots to which the extract information of the one file or the folder is allocated with the extension slot number, presence/absence information, slot number, and extension information being indicated by the group of property.

11. A recording medium on which a program for a file management method for causing a computer to execute a predetermined procedure to manage a plurality of files stored in a predetermined region is recorded, the processing procedure comprising the steps of:

classifying extract information of the files and a folder for individual types of the extract information into groups including a group of property to which property information of the files is allocated and a

different group different from the group of property;

allocating, in the different group of the extract information, the extract information of one of the files or the folder to one or a plurality of slots of a fixed length; and

allocating, in the group of property, the extract information of the one file or the folder to one or a plurality of slots of the fixed length so that said group of property has at least slots corresponding to the slots of the different group to produce an index file;

the slots of the group of property having set therein management information for managing the groups being set;

the management information of each of the slots of the group of property having set therein valid/invalid information representative of whether the slot is valid or invalid, an extension slot number pointing to an extension slot succeeding the slot, presence/absence information representative of whether a corresponding slot of the different group to which the extract information of the file relating to the slot is allocated is present or absent, a slot number pointing to the corresponding slot of the different group, and extension information representative of whether or not the

corresponding slot of the different group is an extension slot;

a combination of the slots to which the extract information of the one file or the folder is allocated with the extension slot number, presence/absence information, slot number, and extension information being indicated by the group of property.